GAU 1643

Patent Docket P1099C1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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1>#4
1-14-00

In re Application of William R. Arathoon et al. Serial No.: 09/373,403 Filed: 12 August 1999 For: A METHOD FOR MAKING MULTISPECIFIC ANTIBODIES HAVING HETEROMULTIMERIC AND COMMON COMPONENTS	Group Art Unit: 1643 Examiner: Unassigned **CERTIFICATE OF MAILING** I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on December 13, 1999 Pamela Gavette Pamela Gavette

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

Applicants submit herewith patents, publications or other information (attached hereto and listed on the attached Form PTO-1449) of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56.

This Information Disclosure Statement:

(a) [] accompanies the new patent application submitted herewith. 37 CFR §1.97(a).

(b) [] is filed within three months after the filing date of the application or within three months after the date of entry of the national stage of a PCT application as set forth in 37 CFR§1.491.

(c) [X] as far as is known to the undersigned, is filed before the mailing date of a first Office action on the merits. Should any fee be due, the U.S. Patent and Trademark Office is hereby authorized to charge Deposit Account No. 07-0630 in the amount of $240.00 to cover the cost of this Information Disclosure Statement. Any deficiency or overpayment should be charged or credited to this deposit account.

(d) [] is filed after the first Office Action and more than three months after the application's filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a notice of allowance, whichever occurs first, and is accompanied by either the fee ($240) set

forth in 37 CFR §1.17(p) **or** a statement as specified in 37 CFR §1.97(e), as checked below. Should any fee be due, the U.S. Patent and Trademark Office is hereby authorized to charge Deposit Account No. 07-0630 in the amount of $240.00 to cover the cost of this Information Disclosure Statement. Any deficiency or overpayment should be charged or credited to this deposit account. **A duplicate of this sheet is enclosed.**

(e) [] is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and is accompanied by the fee ($130) set forth in 37 CFR §1.17(i) **and** a statement as specified in 37 CFR §1.97(e), as checked below. **This document is to be considered as a petition requesting consideration of the information disclosure statement.** The U.S. Patent and Trademark Office is hereby authorized to charge Deposit Account No. 07-0630 in the amount of $130.00 to cover the cost of this Information Disclosure Statement. Any deficiency or overpayment should be charged or credited to this deposit account. **A duplicate of this sheet is enclosed.**

[If either of boxes (d) or (e) is checked above, the following statement under 37 CFR §1.97(e) may need to be completed.] The undersigned states that:

[] Each item of information contained in the information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.

[] No item of information contained in this information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this information disclosure statement.

A list of the patent(s) or publication(s) is set forth on the attached Form PTO-1449 (Modified).

A copy of the items on PTO-1449 is supplied herewith:

[] each [X] none [] only those listed below:

Those patent(s) or publication(s) which are marked with an asterisk (*) in the attached PTO-1449 form are not supplied because they were previously cited by or submitted to the Office in a prior application Serial No. 08/850,058, filed May 2, 1997 and relied upon in this application for an earlier filing date under 35 USC §120.

[] BLAST results enclosed:

The undersigned also wishes to bring to the attention of the Examiner BLAST results of computerized alignments of the against sequences contained in the GenBank and

Dayhoff databases. The BLAST results are provided in paper form and are identified as reference "BLAST Results A-1- A-()" (GenBank) and "BLAST Results B-1 - B-()" (Dayhoff) on the PTO Form 1449. Applicant requests that these references also be considered and that the Form 1449 be initialed to indicate the Examiner's consideration of the references.

A concise explanation of relevance of the items listed on PTO-1449 is:

[X] not given

[] given for each listed item

[] given for only non-English language listed item(s) [Required]

[] in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references.

The Examiner is reminded that a "concise explanation of the relevance" of the submitted prior art "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention," MPEP §609.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR §1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR §1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR §1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR §1.98 and MPEP §609 and the Examiner is respectfully requested to consider the listed references.

Respectfully submitted,

GENENTECH, INC.

Date: December 13, 1999

By: _____

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FORM PTO-1449

U.S. Dept. of Commerce
Patent and Trademark Office

Atty Docket No.	Serial No.
P1099C1	09/373,403
Applicant: Arathoon	
Filing Date: 12 Aug 1999	Group: 1643

LIST OF DISCLOSURES CITED BY APPLICANT

(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Name	Class	Subclass	Filing Date
	* 1	4,816,567	28.03.89	Cabilly et al.			
	* 2	5,116,964	26.05.92	Capon et al.			

FOREIGN PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No
	* 3	314,317	03.05.89	EPO				
	* 4	WO 89/02922	06.04.89	PCT				
	* 5	WO 91/08298	13.06.91	PCT				
	* 6	WO 92/10209	25.06.92	PCT				
	* 7	WO 92/22653	23.12.92	PCT				
	* 8	WO 93/06217	01.04.93	PCT				
	* 9	WO 93/11162	10.06.93	PCT				
	*10	WO 96/27011	06.09.96	PCT				
	*11	WO 96/37621	28.11.96	PCT				

OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, etc.)

	*12	Barton, "Protein sequence alignment and database scanning" Protein Structure Prediction pps. 31-63 (1996)
	*13	Berg et al., "Bispecific Antibodies that Mediate Killing of Cells Infected with Human Immunodeficiency Virus of Any Strain" Proc. Natl. Acad. Sci. USA 88:4723-4727 (June 1991)
	*14	Berman et al., "Protection from Genital Herpes Simplex Virus Type 2 Infection by Vaccination with Cloned Type 1 Glycoprotein D" Science 227(4693):1490-1492 (March 22, 1985)
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	*17	Carter et al., "High level escherichia coli expression and production of a bivalent humanized antibody fragment" Bio/Technology 10:163-167 (1992)
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	*19	Chamow et al., "A Humanized, Bispecific Immunoadhesin-Antibody That Retargets CD3^{+} Effectors to Kill HIV-1-Infected Cells" Journal of Immunology 153:4268-4280 (1994)
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	*21	Clackson et al., "Making antibody fragments using phage display libraries" Nature 352:624-628 (1991)
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Examiner	Date Considered

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, etc.)

	*23	Dietsch et al., "Bispecific Receptor Globulins, Novel Tools for the Study of Cellular Interactions" Journal of Immunological Methods 162:123-132 (1993)
	*24	Ellison et al., "The nucleotide sequence of a human immunoglobulin $C_{\gamma 1}$ gene" Nucleic Acids Research 10(13):4071-4079 (1982)
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	*40	Le Doussal et al., "Bispecific Monoclonal Antibody-Mediated Targeting of an Indium-111-Labeled DTPA Dimer to Primary Colorectal Tumors: Pharmacokinetics, Biodistribution, Scintigraphy and Immune Response" J. Nucl. Med. 34:1662-1671 (1993)
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	*42	Marks et al., "By-passing immunization: building high affinity human antibodies by chain shuffling" Bio/Technology 10:779-783 (1992)

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